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# Supreme Court of the United States

OCTOBER TERM, 1959

NO. 855

NATIONAL LATEX PRODUCTS COMPANY and THE AKRON PRESFORM MOLD COMPANY,
Petitioners,

v.

THE SUN RUBBER COMPANY, Respondent.

## APPENDIX TO PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

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## APPENDIX

## OPINION OF THE DISTRICT COURT

Filed January 29, 1958.

**Jones, Chief Judge.**

By consent of the parties, these two cases were consolidated for trial for the reason that they each involve the validity and infringement of the same patents. The patents are related to each other, each by reference in the patent, as are the parties related contractually.

One of the patents, Molitor No. 2,629,134 provides for a process or method for making hollow plastic articles. The other, Martin, et al., No, 2,629,131 discloses a machine for making the hollow plastic articles according to the process patent.

The defense is invalidity for lack of invention because of anticipation by earlier patents and because of earlier known publications. It is not thought essential to decision that a detailed recital be given of the extensive evidence and opinions developed in the trial of this case; nor of the wide sweep of the discussions involved in considering the patent claims in issue and the disclosures of the prior art patents and publications. It will be sufficient to set down my reactions, findings and conclusions as to the issues of validity and infringement. The cases were tried before the court for approximately ten days, including extensive oral argument at the conclusion.

I belong to the school that still believes the granting of a patent by the Government presents a strong evidential presumption of validity, and that a heavy burden rests upon those who challenge its validity in an in-

fringement suit. This, I regard as a sound rule, and, unless lack of invention clearly is evident to the court, the defense is of no avail.

Defendants rely chiefly upon the Italian Patent to Delacoste as a challenge to the validity of Molitor's process. Reliance almost entirely rests upon that Italian patent, and defense otherwise depends upon invalidity through lack of invention.

It will be interesting first to determine whether Delacoste, as a foreign patent, is a valid anticipation. Why was Delacoste rejected by the Patent Office? No definite answer is provided. Therefore, I am driven to conclude that it was rejected by the Patent Office probably either for lack of clarity or for lack of patentability. Despite expert Beal's testimony that he could, as one skilled in the art, practice the Delacoste process as disclosed in the patent and without any research or experimentation, I cannot adopt such view from the evidence before me. There appears to have been no history of any practice of Delacoste. On his earlier visit to the United States he mentioned that he had such a patent but did not disclose the process to the men he met. Only on a later visit and upon insistence of the people in Massachusetts with whom he was experimenting (later than Molitor's filing) did he file his second application in the United States Patent Office, endeavoring to clarify and set forth the various steps essential to successful prosecution of the later application.

Working with plastics such as vinyl resins and the like as a more useful and durable material than rubber or its synthetic substitute such as latex was not new (nor was it claimed to be) with Molitor, but the new

and improved method for manufacturing completely hollow plastic (plastisol) articles by continuous and automatic rotative mechanism with correlation of timing and temperature witnessed the first commercially successful method and means for producing such articles in an impressive way and in greatly increased and substantial quantities.

But if it should be thought that Delacoste is a valid reference, (which I previously have held as a foreign patent required a clear and definite disclosure which would permit one skilled in the art to practice the invention without experimentation, Simons Co. v. Champion Spring Co., 82 F.Supp. 910 (1929)) then I ask, has anyone, under this evidence, tried to produce a complete thin walled hollow plastic article in accordance with the claims and method disclosed by Delacoste? Expert Beal told of the numerous types of hollow articles made of "plastisol" and elements old in the art, but no physical examples or exhibits of drawings, photographs or other publications were produced to support his statements of the earlier practices of which he so freely related in his testimony. He compared Claim 2 of Delacoste with Claim 1 of Molitor in issue. Delacoste was directed to making hollow objects out of synthetic resin completely polymerized, held in suspension in suitable plasticizer, and this to be accomplished by rotating in all directions of closed molds, into which had been deposited a desired amount of the material. The molds to be heated so as to transform the enclosed material to a "gel". Thereafter the mold to be opened and the hollow object removed. No details as to how to practice the process, or the mechanical steps required to accomplish

the manufacture of the completed hollow object were given.

One step missing in Delacoste and, as I think, essential (and not obvious) to produce the article is the recognition of the temperature change to accomplish the transition of the material from gel to fusion.

Without considerable experimentation and a search for disclosures in the wide field of heat treating, time exposure and range of temperatures, together with the failure clearly to define the type and composition of material required to make the character of article intended, leaves Delacoste without effective force as anticipation. It is my view that the method or process of Delacoste can not be accorded the status of an anticipation of Molitor. This view seems to me to be consistent with the fact that Delacoste's first application was rejected by the United States Patent Office based upon his Italian patent.

Delacoste did not make obvious the complete essential details of his process so that it could be practiced by one skilled in the art without considerable experimentation in materials, as well as in the necessary steps required to accomplish the result if the successful making of the type and character of thin-walled hollow plastic articles here under consideration could be accomplished.

I find that the Delacoste Italian patent does not have the required clarity and disclosure which would be so obvious to one skilled in the art as to enable him to practice the Delacoste method or process without experimentation and this is especially fatal to a foreign

patent as a bar. Delacoste does not anticipate Molitor (Simons Co. v. Champion Spring Co., supra).

Molitor's disclosure of a successful correlation of the temperature and timing elements and the indicating of detailed steps in a continuous automatic method of producing the article certainly cannot be attributed to the earlier disclosures of Delacoste, or any other earlier citation.

There is no doubt as to the evidence of experimentation, research and development by others in the field of vinyl resins such as plastisol and other plastics by those who have been engaged in rubber and latex manufacture; this was developed in the evidence as to slush molding and the Kaysam method, but no one theretofore had disclosed the unique and original combination which, with some novel elements and also some old or known elements, produced a successful process for making thin walled hollow plastic articles, such as have been exhibited here, accurately, in my judgment, defines the value of the Molitor patent.

The patentee stated that he was presenting to the Patent Office a new and improved method of manufacturing articles from synthetic vinyl resins, and detailed the steps through which he proposed to accomplish it.

Temperature and timing may be said to be the important elements in the Molitor process which are not found, or obvious, in the earlier art.

Perhaps I should give my reaction to a further attack upon the Molitor validity. Defendants have attacked Molitor on the ground that statements made by his attorneys in the Patent Office were misleading.

Under the evidence, I am unable to find that this challenge is sustained or presents a bar to the validity of his patent. The Molitor patent is valid.

Next, in an orderly way, is the consideration of the challenge presented against the validity of the Martin and Rekettye Patent No. 2,629,131, claims 18 and 31 to 33 in issue. Probably the most pertinent patents relied upon by the defendants as anticipation are Voelke No. 803,799; Kay No. 1,998,897 and Killian No. 2,128,827. These three, I should say, are in the defendants' front line as bars to novelty in Martin. Expert Beal, as it seemed to me, found it too easy and simple to read these earlier machines on the plaintiff's structure, but, in my judgment, quite drastic changes, modifications and re-arrangements of parts definitely would be necessary to bring about equivalents and such changes, in my view, were not obvious to those skilled in the art.

It is my impression that the prior art patents chiefly relied upon for anticipation were not thought to disclose all of the steps claimed by Martin, but rather they disclosed sufficient of the important features of Martin so that one skilled in the art of rotational molding of hollow articles from plastic materials in a continuous operation well could have produced the structural design of Martin. This was, I think, conceded by Mr. Hagen in respect of the so-called Kaysam method, the manufacturing mechanism of which did not, as I see it, anticipate Molitor or Martin. Perhaps some phases of the Kaysam process and operation could account for earlier practices of the rotational casting art, but considerable modification and more than engineering skill would in my opinion have been required to bring about the equivalent of the plain-

tiff's method and operation. The steps as practiced, according to Mr. Hagen's testimony, were not the unique and original combination of an automatic, continuous rotational operation which produced and resulted in a completed article without further treatment. My opinion is, and I so find, that the Kay Patent, or Kaysam practice is not an effective anticipation of Martin or Molitor. This also I feel I can say respecting the Voelke Patent, No. 803,799. I do not regard the manufacture of the automobile horn bulb more than a year before as a bar to the patent rights here involved.

It is axiomatic that the job of reconstruction of earlier patents becomes easier after the challenged structure has been disclosed. This is particularly true in respect of the extensive reconstruction of the Killian Patent as proposed by Mr. Beal to make it read on Martin. It might be well in passing to state that the Killian Patent was declared invalid by Judge Learned Hand.

The Martin machine provided an automatic continuous means whereby, from the pouring of the desired amount of material (plastisol) into closed molds until the extraction of the completed article, no manual operation was required. This had not theretofore been accomplished or disclosed in any earlier patent or publication. While it is true, as urged by defendants' counsel in argument, that a finding of validity of the Martin patent over earlier citations and references will result in an exclusive monopoly in the art, nevertheless, if its novelty, utility and commercial success are established the result will have to be accepted.

It is my judgment that the defenses against the validity of Martin and Rekettye Patent No. 2,629,131 are not sufficient to overthrow it and I find the patent valid.

Coming now to the more difficult question as to whether the defendants' manufacture by the Akron Mold machine infringes the plaintiff's patent, I recognize that the prior art and earlier practices present some potent disclosures of various elements and features in the art of rotable mold casting of hollow articles from different fusable materials, which must require the patent claims in issue to be held to a somewhat restricted scope. But plaintiff does not claim broad coverage for its patent as pioneer or original as to all the elements disclosed. It is as I have stated elsewhere, a unique and original combination of an automatic, continuous rotational operation which produced and resulted in a completed article without further treatment.

The articles furnished for publication in the Ashland Times and "Modern Plastics" describe defendants' method and operation in the making of hollow toys from vinyl resins (plastisol) and the deposition testimony of Wittington, representing the development of the process and so-called Miller machine, give strong support to a conscious copying of the plaintiff's method and machine. While, as I stated above, the court can not give the scope and reach of a pioneer patent to the claims in issue, yet there is sufficient disclosure of original and valid features to cover what the defendants are doing. The testimony of Sessions; the deposition of Wittington; and ocular demonstration of the machine before the court convince me that the defendants' so-called Miller machine and manufacture infringe. One can not escape infringement by a variation in design or departure in process with no substantial or effective difference.

The evidence offered in support of defendant Akron Mold's tenth paragraph of its answer as to misuse of the patent rights by the plaintiff in respect of the provision of license agreements is not sufficient and not satisfactory so as to deny the relief prayed for by the plaintiff. The alleged discrimination in license agreements as to Goodrich, Sherwin-Williams and perhaps others is satisfactorily explained in the consideration for, and the concessions made, by the favored licensees. There was consideration for such second license agreements and therefore no discrimination amounting to misuse.

Since defendant Akron Mold designed the Miller machine in cooperation with Wittington for the purpose of manufacturing the National Latex articles, it must be held as a contributory infringer.

What has been said is regarded as compliance with Rule 52.

Decree of validity, infringement and injunction may be entered, with the usual provision for reference on damages.

s/ JONES
United States District Judge.

## OPINION OF COURT OF APPEALS

Filed October 28, 1959.

Before ALLEN and MCALLISTER, Circuit Judges, and MATHES, District Judge.

**Allen, Circuit Judge.** This is an appeal from a judgment of the District Court holding Molitor Patent No. 2,629,134 "Method of Manufacturing Articles from Vinyl Resins" and Martin and Rekettye Patent No. 2,629,131 for "Apparatus for the Manufacture of Hollow Cast Articles," valid and infringed.

All four claims of the Molitor patent are in suit. The patent is for a process of making hollow articles from vinyl plastisols. The Martin patent is for a machine designed automatically to carry out the Molitor process. Appellee, The Sun Rubber Company, of Barberton, Ohio, hereinafter called Sun Rubber, owns both patents. Appellant, National Latex Products Company, of Ashland, Ohio, hereinafter called National, practices the process described in Molitor. Sun Rubber and National compete in manufacture of the articles produced by the Molitor process, such as balls and toys. Co-appellant, The Akron Presform Mold Company, hereinafter called Presform, was joined as alleged co-infringer. Individual officers of National and Presform were joined below as co-defendants. As to them the complaint was dismissed and no appeal was taken.

### *Molitor Patent No. 2,629,134.*

This patent was issued February 24, 1953, on an application filed June 27, 1950.

The process is called rotational casting and may be briefly described as follows: A hollow sectional mold is charged with a measured amount of fluid plastisol mixed with vinyl resin and then closed. The mold is rotated in a compound manner about two axes and at the same time is heated. The mixture is forced against the interior surface of the mold and as the temperature of the material rises the mixture gels and a film is uniformly distributed on the interior surface of the mold. Heating is continued until the mixture reaches the fusion temperature, usually around 350° F. At this temperature the liquid plastisol is fused with the divided particles of the vinyl resin. The mold is then cooled and the cooling process gives the mixture tensile strength. The mold is opened and the finished article is removed.

Many advantages are asserted for the method. Since a precise quantity of material less than the volume of the mold is measured into the mold, accurate control of the weight of the product is secured. The time of manufacture, formerly consuming a day or more, is reduced to a fraction of an hour. Shrinkage of the article produced is greatly lowered. Distortion or tearing is largely eliminated; scrap is minimized.

The court held both patents valid and concluded that National infringed the Molitor patent and that Presform infringed because of building and selling the accused Miller machine. National concedes that, if the Molitor process is patentable, National infringes. It contends that the Molitor patent is invalid because (1) Molitor failed in his application to comply with the requirements of 35 U. S. C., Sections 112 and 115, (2) because of anticipation in the prior art and (3) the Molitor process sub-

jects an old material to an old treatment producing no new result and presenting no patentable invention.

The Molitor patent had an arduous passage through the Patent Office. It was rejected four times on prior patents including Rempel, No. 2,469,892, Johnson British Patent No. 500,298, and Kay, No. 1,998,897.

The assertion of noncompliance by Molitor with 35 U. S. C., Sections 112 and 115, arises out of certain amendments to his claims. The original claims did not state what material should be used in constructing the mold nor expressly describe its qualities. In final form each of Molitor's four claims specifies that the mixture shall be rotated in a hollow sectional mold whose inner surface is "non-porous". Claim 4, which is typical, is printed in the margin.[1]

The original claims not only did not describe the material of the mold as nonporous but also failed to teach that the molds should be made of metal or any other impervious material. National urges that by the addition

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[1] 4. The process of making hollow articles from a liquid mixture of a vinyl resin and a plasticizer therefor, comprising the steps of depositing a measured charge of said mixture in a hollow sectional mold, the inner surface of which is non-porous, the charge being less in volume than the volume of the mold, closing the mold and maintaining it in closed condition to prevent the escape of the mixture and air from the mold cavity, heating the closed mold and at the same time revolving it in a plurality of planes and for a sufficient period to cause the mixture to gel as a layer of uniform thickness over the entire inner surface of the mold, applying further heat to said mold to fuse the gelled layer, then cooling the mold until the temperature of the gelled layer is below the fusing point thereof, opening the mold and removing the article therefrom.

of the term "non-porous" Molitor violated the provisions of 35 U. S. C., Sections 112 and 115. These sections read in part as follows:

> "§ 112. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."
>
> * * * * * * *
>
> "§ 115. The applicant shall make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; and shall state of what country he is a citizen. * * *"

National relies upon *Schriber-Schroth Company v. Cleveland Trust Company*, 305 U. S. 47, 57, which holds that the statutes require a description from which others may know "which features may be safely used or manufactured without a license and which may not. *Permutit Company v. Graver Corporation*, 284 U. S. 52, 60." It also relies upon *Muncie Gear Works, Inc., v. Outboard, Marine & Manufacturing Company*, 315 U. S. 759, which holds in effect that the application for a patent cannot be enlarged by amendment to embrace an inven-

tion not disclosed in the application as filed, when adverse rights of the public have intervened. Cf. *Coats Loaders & Stackers, Inc., v. Henderson*, 233 Fed. (2d) 915, 922 (C. A. 6).

In his arguments before the Patent Office touching the amendment of the claims Molitor asserted that the nonporous mold was essential to his invention and differentiated the Rempel patent No. 2,469,892 on that precise ground. Rempel discloses a porous mold essential for absorbing the watery constituent of latex. The Molitor process does not use latex. National contends that, as the Molitor application and specification did not require the mold to be nonporous on its interior surface, the belated inclusion of that provision in the claims constitutes a material change in the invention described. If Molitor failed to comply with 35 U. S. C. 112 and 115 the patent is void. *Permutit Company v. Graver Corporation*, *supra*.

Molitor also failed to execute a new oath in connection with the amendments and if the amended claims went beyond the scope of the application National contends the patent is void for lack of proper attestation. Cf. *Steward v. American Lava Company*, 215 U. S. 161, 168; *Wagenhorst v. Hydraulic Steel Company*, 27 Fed. (2d) 27 (C. A. 6).

The objection as to the violation of Sections 112 and 115 must be overruled. The Molitor patent drawing No. 1 is cross-hatched. This means that the contemplated material of the mold is metal, for under the rules of the Patent Office cross-hatching signifies material of metal. Fairly construed, a mold of metal not otherwise described is impervious and nonporous. To add the word

"non-porous" to a description of metal would usually be a redundancy. Moreover, the application expressly refers to the Martin patent, also involved herein, which provides that the matrices or molds are usually made of metal, preferably copper or steel, copper or bronze plated on the inner surfaces and exteriorly coated with a dark, heat-absorbing coating. Thus by specific reference the Molitor application supplies the necessary disclosure as to the material to be used in constructing the mold. The disclosure of a patent application may be supplemented by reference to another patent. *Application of Heritage*, 182 Fed. (2d) 639, 643 (C. C. P. A.). The reference to the Martin patent in the Molitor specification constituted such a supplement. The phrase "non-porous" involved only a minor change necessary to secure complete protection for what, as shown by the drawing, the applicant originally intended to reserve to himself. *Engineering Development Laboratories v. Radio Corporation of America*, 153 Fed. (2d) 523, 526 (C. A. 2); *General Electric Company v. Cooper Hewitt Electric Company*, 249 Fed. 61, 64 (C. A. 6). In the *Muncie Gear Works* case, *supra*, the original claims had been limited and claims not containing the limitations of the specifications were allowed. The Supreme Court held that the original application and some later amendments wholly failed to disclose the invention finally described and asserted. In the instant case the nonporous character of the mold was clearly shown by the drawing filed with the original specification and the reference to the Martin patent. The amended claims were equivalents of the original claims. As pointed out by Judge Learned Hand in *Engineering Development Laboratories v. Radio Corporation of America, supra*, the doctrine of *Muncie Gear*

*Works, Inc., v. Outboard Marine & Manufacturing Co., supra,* "certainly does not prevent amendments which go no further than to make express what would have been regarded as an equivalent of the original * * *." *Interchemical Corporation v. Sinclair & Carroll Company,* 144 Fed. (2d) 842, 846 (C. A. 2). The description in the specification and claims is sufficient to "enable one skilled in the art, with the specifications and claims before him, and without the necessity of further experiment itself of an inventive nature, to practice the invention of the patent." *National Battery Co. v. Richardson Co.,* 63 Fed. (2d) 289, 293 (C. A. 6).

As the phrase "non-porous" did not enlarge the claims, the contention that a supplemental oath was required must be overruled. The attack upon the validity of Molitor on this score has no merit.

National next contends that Molitor is void because it is anticipated by the prior art. On this point National carries a heavy burden. In order to invalidate a patent on the ground of prior use the proof of prior knowledge and use must be clear and satisfactory. Oral testimony unsupported by patents or exhibits is open to suspicion. 40 Am. Jur. 549, Section 29, and cases cited. *T. H. Symington Co. v. National Malleable Castings Co.,* 250 U. S. 383, 386; *Petersime Incubator Co. v. Bundy Incubator Co.,* 135 Fed. (2d) 580, 582 (C A. 6).

35 U. S. C., Section 102 (b), reads as follows:

"A person shall be entitled to a patent unless—

"(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than

one year prior to the date of the application for patent in the United States * * *."

A prior public use by [*National*] Molded Latex Products Co. hereinafter called "Molded Latex"* is strongly relied on as invalidating Molitor. National asserts that on June 13, 1950 [*it*] Molded Latex delivered in Canada 3,000 dozen doll heads, rotationally cast and made of vinyl plastisol. This delivery was prior to Molitor's filing date of June 27, 1950. It was not, however, as hereinafter shown, prior to Sun Rubber's commercialization of the Molitor process April 23, 1950, and neither was it prior to the conception thereof by Molitor in the Spring of 1948. A written order dated April 25, 1950, was presented for these doll heads and this constitutes the principal written evidence concerning the transaction. National argues, on the basis of its assertion previously overruled herein that Molitor enlarged his patent by the amendments allowed to his claims that the crucial date [35 U. S. C., Section 102 (b)] of "more than one year prior to the date of the application for patent" under this record is more than one year prior to the date of the presentation by Molitor of the amended claims containing the express disclosure of "non-porous" molds. The sale of the doll heads by [*National*] Molded Latex consummated on June 13,

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*At the time the Memorandum on Petition for Rehearing was filed certain changes were made in the Opinion. In this appendix, the words deleted are printed in italics and enclosed within brackets; the words added are underlined.

The printed report in the advance sheets of the Federal Reporter differs in material respects from the Opinion on file in the clerk's office. The Opinion printed in this appendix is the one on file in the clerk's office.

1950, was more than a year prior to the amendment of the Molitor claims but not more than one year prior to the date of application for the Molitor patent. In accordance with our holding previously made that the addition of the specification that the molds be "non-porous" was only a minor change not invalidating the patent, *Coats Loaders & Stackers, Inc., v. Henderson, supra,* we overrule National's contention on this point. As to the prior use asserted by National, the critical date is June 27, 1950, the date of Molitor's application for the patent.

Due to the fact that both slush molding and the Kaysam process are involved in the factual setting of this question of prior use it is necessary to discuss each of these methods briefly.

The manufacture of small hollow objects and toys out of rubber, natural or synthetic, during the period involved here in large degree employed a process called slush molding. This was the process used by Sun Rubber at the time of Molitor's conception of his method.

Slush molding is used in molding or casting objects made of an aqueous dispersion of rubber, natural or synthetic. In the process the object is made by pouring the material to be cast into a mold having an aperture and agitating or revolving it so that a shell of material solidifies on the inner surface of the mold. The excess material is poured out through the aperture of the mold. The process is sometimes called the in-and-out method. In slush molding there is no rotation of the mold but the material is gelled and fused by heat, extracted from the mold and subjected to an extensive curing process before it is ready for the market.

The process used by [*National*] Molded Latex was the Kaysam process, based on the disclosure of the Kay patent No. 1,998,897. The mold used by [*National*] Molded Latex had an aperture through which excess material was poured out in the initial stage. In contrast to slush molding the Kaysam process employed rotational casting with the mold rotated in two planes. Both the Kaysam process and slush molding used latex, a synthetic rubber, which contained 30% of water. After the desired thickness had been obtained the liquid content of the latex was still present in the rubber film and had to be removed before the object was in finished form. This resulted in a great degree of shrinkage. Sun Rubber under slush molding had a shrinkage of 20% linearly and 40% horizontally. In the [*National*] Molded Latex operation the shrinkage was almost 40% by volume. If the article in its final form shrinks from a ten-inch cast dimension to approximately eight inches in the same direction this lowers the salability of the article. Also, the article was soft and apt to be torn in removal from the mold.

It appears from the testimony of Prendergast, Ficarra and Gelles of [*National*] Molded Latex and Molitor of Sun Rubber, that both competitors during the period from 1947 to 1950 were concerned with the same problems of production, the elimination of shrinkage, and the distortion and tearing of articles on release from the mold. [*National*] Molded Latex keenly desired to eliminate the time-consuming curing process. As a former licensee of the Kaysam patent Sun Rubber had protested the amount of shrinkage and the fact that the objects stuck in the mold. Thereafter it canceled its license.

Prendergast, research director of [*National*] Molded Latex, in April, 1947, wrote various chemical companies asking for resins suitable for casting or slush molding. A number of these companies replied and a few sent samples. [*National*] Molded Latex was searching for a product which would eliminate the inefficiencies caused by material that had a solvent in it such as latex. Under the Kaysam process after the articles had gelled and fused they had to be filled with water, left in a tank of water for some hours, and after that the water was usually boiled to wash out the impurities. "In latex", Prendergast said, "there are a lot of materials that can putrify and also this gelling agent is a nasty material to leave in a rubber film. * * *." The article had to be squeezed to remove water and later it was dried on racks and cured in an oven. During these various steps shrinkage occurred.

The few samples of resins received by Prendergast from the chemical companies were not satisfactory. Prendergast stated that nothing came of the letters that he wrote. He said, "* * * since neither of these chemical materials seemed to have the properties I was looking for, the thing stopped right there. * * * We dropped it immediately."

It was against this background of dissatisfaction of both [*National*] Molded Latex and Sun Rubber with the Kaysam process that Molitor began his work. As admitted by National:

> "In the Spring of 1948, he [Molitor] heated a mold in an oven to about 250° F. (i.e. about 100° below the fusion temperature of vinyl plastisol), put plastisol in the mold and rotated it by hand.

He found that the plastisol had deposited in a gelled layer. He heated subsequent samples to the fusion temperature and cooled them. Thereafter he mounted the mold on a mechanically driven shaft but was not satisfied with the distribution of the plastisol in the mold. He then asked Mr. Rekettye to arrange the mechanism so that the mold would rotate in two planes. With that arrangement, he achieved a satisfactory distribution of the plastisol; after the rotation, he put the mold in the oven for fusion, then cooled it and removed the product."

Molitor's work was interrupted by a strike which closed Sun Rubber's plant on May 8, 1948, and ended early in September, 1948. After that time Molitor worked actively with his superiors in Sun Rubber to reduce his conception to practice. Molitor's activities with reference to development of his idea are set forth in written reports which are in evidence, dating from April, 1948. In the report of April 20 Molitor reported that satisfactory toys were produced by curing 40 to 50 minutes under infrared lamps. At the side of this report his superior, Lile, noted "better than O. K." A progress report upon vinyl resin was dated October 4, 1948. As reflected in Molitor's progress reports of October 5 and December 6, 1948, on Molitor's orders a number of Mickey Mouse toys were made by a method which employed rotational casting.

At the end of the strike Molitor was authorized to continue work on this project. Molitor's superiors ordered the company's development engineer to modify the inadequate motor which Molitor first used so as to rotate the mold in two planes and secure satisfactory

distribution of the mixture. He conferred with the engineering department as to building an automatic machine which would carry out his method. The engineers revised the machine early in February, 1949, and the company gave an order for the building of the No. 1 machine. Another order raising the estimate of the cost was given on March 9, 1949, and after trial runs making Mickey Mouse toys by molds ordered in July, 1949, using rotational casting, the machine went into commercial production during the period ending April 23, 1950. Since a process is reduced to practice when successfully performed (*Corona Cord Tire Company v. Dovan Chemical Corporation,* 276 U. S. 358, 383) this record shows that the Molitor process was reduced to practice long before 1950.

In contrast to Molitor's conception of the process in the Spring of 1948, conceded by National, and the positive testimony, much of it written, as to reduction to practice during 1949 above set forth, there is no definite evidence that [*National*] Molded Latex proceeded with the research until late in 1948. Moreover, [*National's*] Molded Latex's work on the vinyl resins in 1948 and 1949 was experimental and not successful. Cf. *Deering v. Winona Harvester Works,* 155 U. S. 286, 302.

Both Ficarra and Gelles testified in substance that the doll heads sent to Imperial Crown Toy Corporation June 13, 1950, on a signed order were rotationally cast and employed vinyl resin. Ficarra's notebook was heavily relied upon to establish the fact that this sale constituted a prior use. Late in 1948 Ficarra began a number of experiments with reference both to slush molding with latex and to plastisols. While Ficarra says that he worked with vinyl plastisol from the end of 1948 to the

early part of 1950, and that he spent 90% of his time in developing plastisols for rotational castings, this oral testimony cannot justify the conclusion that [*National's*] Molded Latex's experiments constituted a prior use over a method conceived early in 1948 and reduced to practice through a machine completed in 1950 and made for the express purpose. While Ficarra was aware of the Goodrich bulletins and worked with some of the resins, he stated that the commercial materials then available and used by [*National*] Molded Latex were not satisfactory. He said that their viscosities were of such high consistency that they did not adapt themselves to the rotation processes and that his work consisted in conducting a series of experiments to develop a formulation of his own better than that available on the market. At the time his employer was still manufacturing latex products by the Kaysam process. No written record was presented of the satisfactory experiments that Ficarra said he had. He testified that the plant actually got into commercial production "I guess about 1950 * * * the early part."

Both Ficarra and Gelles in effect admitted that the problem of release from the mold solved by Molitor was solved neither by themselves nor by [*National*] Molded Latex in these experiments. Under this record it cannot be denied that Molitor was the first to conceive and the first to reduce his idea to practice. In this respect Sun Rubber is on safer ground than National, whose claim of prior use was based principally on oral testimony. The only written evidence is Ficarra's notebook, which begins after Molitor's conception of the process. Both the order for the doll heads and the delivery were long

after Molitor and Sun Rubber had reduced the method to practice.

Gelles stated that he "would estimate" that the development work which resulted in the Imperial Crown Toy order was started "within the months of January and February, 1950." If this was the date of manufacture it would not constitute a public use one year prior to June 27, 1950, the date of Molitor's patent application.

No documentary evidence and no models or drawings were presented supporting the contention that these doll heads were rotationally cast. Apart from the fact that the evidence does not relate to transactions taking place one year before Molitor's application date (35 U.S.C., Section 102), the oral testimony taken on this point after a lapse of seven years was open to suspicion.

*Tillotson Prior Use.*

It is alleged that the Tillotson Rubber Company, a manufacturer of rubber and resin products, shipped articles of vinyl plastisol rotationally cast to its Canadian subsidiary in August, 1948. Invoices were introduced in evidence covering the sale in Canada, but not showing that the articles sold, which were dipping forms, were rotationally cast. Other invoices showed numerous purchases of vinyl resin by Tillotson during this period, but at the time Tillotson was also using latex, practicing the Kaysam process on a Kay machine. Certain dipping forms, claimed to be "similar" to those sold in Canada, were received in evidence but the only witness testifying with reference to the alleged prior use stated that he did not know when these dipping forms were made. In what way the dipping forms presented in

court were "similar" to those sold in Canada was not explained. Under the rule of *Symington Co. v. National Malleable Castings Co., supra,* this alleged prior use clearly was not established.

*Delacoste Italian Patent No. 440,295.*

In the District Court this Italian patent, which had not been presented to the Patent Examiner, was stressed as constituting the closest anticipation of Molitor. That contention is reiterated here. A motion filed by National to have the Molitor patent declared invalid because of Delacoste was denied by Judge Weick (148 Fed. Supp. 469), upon the ground that the patent did not clearly disclose the essential steps of fusion and cooling as shown in Molitor.

After a lengthy trial in which the District Court viewed motion pictures of the operation of the Molitor process and considerable expert testimony was given, the District Court made a detailed statement of his findings and conclusions as to Delacoste and held that it did not anticipate Molitor. The court noted that there had been no history of any practice of this patent and that an application made to the United States Patent Office by Delacoste for the patent based upon the Italian form had been rejected and subsequently abandoned.

A second and amplified form of Delacoste, amended so that in certain respects it is strikingly similar to Molitor, clarified the Italian patent and added essential details of the process, including that of fusion. This application was presented to the United States Patent Office January 20, 1951 and allowed January 6, 1953.

The District Court found that the Italian patent did not clearly disclose the essential and non-obvious step of the temperature change necessary to accomplish the transition of the material from gel to fusion. As the District Court pointed out, the molds were to be heated so as to transform the enclosed material to a "gel". Thereafter the mold was to be opened and the hollow object removed. As the court correctly found, no details as to how to practice the process or the mechanical steps required to accomplish the manufacture of the completed hollow object were given.

In its opinion which the trial court ordered to be considered as embodying findings of fact and conclusions of law in compliance with Rule 52 of the Federal Rules of Civil Procedure, the court found in substance that considerable experimentation and a search for disclosures in the wide field of heat treating, time exposure, and range of temperatures and a clear definition of the type and composition of material necessary to make the character of article intended would be required to accord to Delacoste the status of an anticipation of Molitor.

The court declared that "Delacoste did not make obvious the complete essential details of his process" and that the Delacoste Italian patent "does not have the required clarity and disclosure which would be so obvious to one skilled in the art as to enable him to practice the Delacoste method or process without experimentation". Hence, the court held that Delacoste does not anticipate Molitor. It stated, "There is no doubt as to the evidence of experimentation, research and develop-

ment by others in the field of vinyl resins such as plastisol and other plastics by those who have engaged in rubber and latex manufacture; this was developed in the evidence as to slush molding and the Kaysam method, but no one theretofore had disclosed the unique and original combination which, with some novel elements and also some old or known elements, produced a successful process for making thin walled hollow plastic articles, such as have been exhibited here."

The terms of the Italian patent support the finding of the trial court. Claim 1, reads as follows:

> "1. The process of manufacturing hollow objects substantially closed and without seams, by a deposit of a fluid or meltable and hardening substance on the inside surface of a closed, rotatory mold, consisting in depositing in the mold the desired amount of natural or synthetic resin, to obtain on the mold a layer of convenient thickness, to which is added if required a hardening agent, by causing the mold to rotate gently in every (any) direction in order to obtain a uniform layer of resin on the entire inside surface of the mold, by heating to transform the layer of resin into gel, thereafter opening the mold and withdrawing the hollow object thus produced."

No other claim of Delacoste supplied information as to the necessity of fusion and as to the temperature required. The specification also fails to disclose this all-essential feature. It says, speaking of the material inserted in the mold,

> "Thereafter it is heated, letting the mold oscillate gently so that the resin deposits itself uni-

formly on the entire surface, and the operation is prolonged until the gel has solidified (become firm) * * *

* * * * * *

"The heating of the mold can be brought about by projection of steam, by immersion in a hot (warm) liquid, electrically, electromagnetically, or by any other means."

The suggestion as to the method of heating apparently relates to the gelling step. Also, no temperature is indicated. "Certainly," testifies one expert, Delacoste teaches "nothing but steam at atmospheric pressure, and that would not be over, perhaps undoubtedly considerably under, 212 degrees." In other words, Delacoste teaches gelling and not fusion. National's expert, Beal, conceded that you cannot leave fusion out and get the finished product. This record supports Beal's statement.

Foreign patents are to be construed more strictly than domestic patents.

"* * * The Supreme Court has said: 'Patented inventions cannot be superseded by the mere introduction of a foreign publication of the kind, though of prior date, unless the description and drawings contain and exhibit a substantial representation of the patented improvement, in such full, clear, and exact terms as to enable any person skilled in the art or science to which it appertains, to make, construct and practice the invention to the same practical extent as they would be enabled to do if the information was derived from a prior patent.'" *Brown v. Brock*, 240 Fed. (2d) 723, 726 (C. A. 4); *Seymour v. Osborn*, 11 Wallace, 516, 555.

Construed thus strictly the District Court correctly held that Delacoste does not contain a substantial representation of the Molitor process in such full, clear and exact terms as to enable any person skilled in the art to practice the invention.

The District Court's conclusion as to the failure of Delacoste to anticipate the process patent must be sustained.

*Bulletins of Goodrich Rubber Co., Inc.*

It is contended that three service bulletins of the Goodrich Rubber Company teach essential elements of Molitor. These were not before the Patent Examiner.

Pertinent extracts from the first two of these bulletins read as follows:

"*Geon Paste Resin 100-X-26*" (May 1, 1947).

After stating that the Goodrich Chemical Company is introducing its Poly-vinyl Chloride Resin in a new form which will permit many processing advantages, the bulletin declares:

> "With this recent development it is now possible to disperse Geon resin in plasticizer, and then with simple processing equipment and proper heat treatment, produce an article possessing the same excellent qualities of the Geon resin mixed on conventional equipment to equivalent resin-plasticizer ratios.
>
> * * * * * *
>
> "Success of this method for formulating Geon paste resin depends upon the fact that solvation or plasticization of the resin is extremely slow at room temperature. As a result, it is possible, while oper-

ating at room temperature, to blend resin and plasticizer, with the plasticizer serving as a vehicle to carry the resin as well as performing its primary function. Until the temperature is raised, the plasticizer remains as a separate liquid or external lubricant for the resin. Upon heating, plasticization takes place, the liquid plasticizer is absorbed by the resin, and the particles fuse and knit together to form a solid mass.

* * * * * *

"After the resin and plasticizer have been blended, the mixture may be molded, cast, coated or dipped. Conventional equipment for performing these operations may be used provided sufficient heat is supplied to fuse the resin. The type of equipment used to heat the paste is not important. Hot air and infra-red as well as other methods have found favor. However, it is essential that the paste itself reach 325-350° F. for maximum strength of the finished product.

* * * * * *

"*Application.*

"Vinyl paste formulations can be used in production of the same type products commonly made by calendering solution of latex techniques.

* * * * * *

"Low pressure molding with pastes thus becomes possible and is perhaps the most important property. It opens the field of molding to those who do not have available heavy machinery.

* * * * * *

"Resin-plasticizer pastes can be poured into molds and fused with the application of heat with-

out the need of applied pressure on the stock in the mold. With the resin-plasticizer paste, there is practically no shrinkage in the mold due to the absence of a chemical reaction or the loss of volatiles."

*"Geon Paste Resin 100-X-210"* (Sept. 2, 1947).

"It it most significant in that the resin is easily dispersed in plasticizer and, with a minimum of equipment, may be molded, cast or used for coating and dipping. This new thermoplastic paste-forming resin eliminates the necessity for heavy and expensive mixing equipment and will produce the same type products commonly made by molding, calendering, solution or latex coating.

* * * * * *

"The plasticizer serves as a vehicle to carry the resin particles and remains as a separate liquid or external lubricant. Upon heating, plasticization takes place, with the liquid plasticizer being absorbed by the resin. This 'fusion' forms a tough, homogeneous and flexible mass.

"In conventional processes where vinyls are calendered, extruded, or molded, the use of heat is necessary during at least two phases of the operation. The resin is first plasticized on a hot mill or other processing equipment and then calendered by hot rolls or extruded through a hot die. In the paste system, heat is necessary only once but must be sufficient to drive the plasticizer into the resin. This necessitates heating the mass to temperatures of 325 to 350 F. to accomplish the fluxing or fusion of the resin and plasticizer."

So far as their date of issuance is concerned, each of these two bulletins might qualify as an anticipation.

(See Title 35, U.S.C., Section 102.) We note that each of them stresses the availability of the two pastes for low pressure molding. This circumstance is called "the important property" of this material which Goodrich in its bulletins is introducing for use in other processes as well as in molding, and for eventual sale. The two bulletins speak in extremely general terms of the molding process. While they describe the dispersion of the resin in the plasticizer and the fusion of the two which takes place upon the application of heat about 350° F., both bulletins fail to describe the gelling process. This step is all-important for, as to hollow articles, it is the gel which creates the skinlike form of the article on the inner surface of the mold. It also ignores the cooling process after fusion which one expert declares to be the step in the Molitor process which gives toughness and pliability to the article reducing, and to a large degree eliminating, distortion, tearing and scrap.

Moreover, the first bulletin states that the resin-plasticizer pastes "can be poured into molds and fused". One skilled in the art who successfully undertook the blending of this paste from the constituents of resin and plasticizer and then poured it into a mold would not be following nor anticipating Molitor. Molitor's initial conception included dispersion of the resin in the plasticizer, gelling the mixture, fusing it, and cooling it all within the same mold.

The third Goodrich bulletin, issued August, 1949, covering Geon paste Resin 121, gave fuller details and is the bulletin most heavily relied upon by appellants as constituting anticipation. It not only includes the fusion step but, as appellant states in its main brief, it "also

describes the 'gel' stage" (omitted in its earlier bulletins), for it teaches pouring the plastisol "into the mold and out again leaving a thin coating over the interior walls." As appellant correctly states, "The thin coating remains because of the gelling that takes place." The third bulletin also teaches cooling of molded articles, for example, doll's heads, before they are stripped from the mold.

The conclusive answer to the contention that the third bulletin constitutes anticipation of Molitor is found in the applicable statute. Under 35 U. S. C., Section 102, the third bulletin does not invalidate the Molitor patent for it was published within the year before Molitor's filing date.

Neither do the first two bulletins anticipate. They contain inchoate suggestions which recommend the use of the Goodrich resin pastes in several arts and foreshadow the wide use of plastisols. They do not teach Molitor's process, which, among other things, discloses the process of blending, gelling, fusing, and cooling the material in the same container, thus helping to secure, as the District Court correctly found, the indication of detailed steps in a continuous method of production never before disclosed in this particular art.

It is significant that Ficarra, [*National's*] Molded Latex's Research chemist, testified that he, too, had the Geon resin. It is a fair inference that the bulletins and information from Goodrich were accessible to Ficarra. However, he stated that the commercial resins were unsatisfactory. This record does not show that Ficarra solved the problem of articles sticking in the molds with which he admitted he had continuing difficulties, prior to

the successful solution by Molitor. Ficarra was skilled in the art but the Goodrich bulletin did not teach Ficarra the method and solution of Molitor. This also indicates that the two applicable Goodrich bulletins do not constitute the clear evidence of prior publication or prior use (35 U. S. C., § 102) required by the Symington case, *supra*.

The final attack upon Molitor is upon the ground of lack of patentable invention. Appellant contends that the Molitor process consists merely of subjecting an old material to an old forming treatment and is not patentable.

We bear in mind the ruling of the Supreme Court, *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U. S. 147, that the question of invention is a question of law. But here questions of fact exist which affect the conclusion of law. We are bound in patent cases by fact findings of the trial court which are not clearly wrong. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 336 U. S. 271. Here the facts as to the accomplishment of this Molitor process are clearly sustained by the record.

As to whether the result of the Molitor process is old, it is clearly shown that through a single operation requiring the labor of one operator, it is possible, for the first time in the history of the art, to manufacture hollow, strong and pliable articles which can be taken from the mold without being torn or distorted; thus, scrap has been largely eliminated. The comparable time of operation has been cut from a day or more to fifteen minutes. The finished article has the exact size and shape of the mold and reproduces minute and detailed markings in

the mold. The labor cost has been greatly reduced. This not only accounts for the enormous commercial success achieved by the Molitor method; in addition, it constitutes a new use in terms of physical and chemical action of the casting batch, resulting in elimination of the curing process formerly required. The substitution of materials has developed new properties in the articles sought to be produced. *Walker on Patents,* Volume 1, Section 66, page 79.

Various elements in Molitor's combination were concededly old. Vinyl resin and plastisol were old. Molitor had used one of the "Geon Resins" of The B. F. Goodrich Chemical Company. The deaeration of the plastisol prior to molding was old. British Patent No. 500,298. Rotational casting was old, appearing in Voelke Patent No. 803,799, Kay Patent No. 1,998,897, Kelm Patent No. 2,262,143 and Rempel Patent No. 2,469,892. The Kay Patent disclosed a nonporous mold. But these facts are not conclusive.

Molitor comprised elements not all of which were old. While the use of the vinyl resin was known, its use in this combination was new. An expert testified that the combination of rotating the mold in a multiplicity of planes and simultaneously heating the vinyl resin plastisol to gel it against the inner surface of the mold while the mold was rotating was new. The step of cooling the temperature of the material in the closed mold below the fusion point after the material had been gelled on the inner surface of the mold and fused was new. In older processes (the Kay Patent, for instance), the mold was opened before the process was concluded. In Molitor the process was concluded before the mold was opened.

In Molitor all essential steps were completed within the mold.

It is established law that all the elements of a combination may be old, *Diamond Rubber Company of New York v. Consolidated Rubber Tire Company*, 220 U. S. 428, 442, and, if the elements coacting produce a new and useful result, the combination is patentable. *Coats Loaders & Stackers, Inc. v. Henderson*, 233 Fed. (2d) 915, 921 (C. A. 6); *Colgate-Palmolive Company v. Carter Products, Inc.*, 230 Fed. (2d) 855, 862 (C. A. 4); opinion by Chief Judge Parker.

Later important cases support this same doctrine. A typical decision is *Brown v. Brock*, 240 Fed. (2d) 723, 726 (C. A. 4). A striking instance is *Technical Tape Corporation v. Minnesota Mining & Mfg. Co.*, 247 Fed. (2d) 343, in which the United States Court of Appeals for the Second Circuit held that an invention relating to adhesive sheets having a backing with a non-fibrous surface and a coating normally tacky and pressure sensitive adhesive united thereto, which consisted of a combination of elements none of which was new, was valid and infringed.

The court unanimously refused to sustain the attack on the patent made upon the ground that its components—cellophane sheets, rubber resin, and rubber resin adhesive, were all old. It held that the combination produced a new quality and function and a new article and was patentable. The United States Supreme Court denied certiorari (355 U. S. 952). To the same effect are *Foster Metal Products v. Jacoby Bender*, 255 Fed. (2d) 869, 874 (C. A. 1), *Bryan v. Richardson*, 254 Fed. (2d) 191, 193 (C. A. 5), (Cert. den. 358 U. S. 815).

and *Georgia Pacific Corporation v. United States Plywood Corporation,* 258 Fed. 2d 124 (C. A. 2), (Cert. den. 358 U. S. 884). This case held that Claim 1 of a patent relating to plywood panelling, which had been held invalid in the District Court, was valid and infringed and declared that commercial success is an important factor in determining invention in a doubtful case.

We recognize that commercial success alone is not the final test of invention. *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., supra,* 153. However, it is a relevant consideration when the question of invention is close. *Coats Loaders & Stackers, Inc. v. Henderson, supra,* 921. But the majority of the court thinks the District Court must be affirmed as to the validity of Molitor for reasons more cogent than that of the striking commercial success attained by practice of the molitor patent. We think the judgment should be affirmed because Molitor has obtained a new product, presenting novel features highly useful in the art, which have received the tribute of the industry by being extensively adopted.

The fact that Molitor used different and more effective materials than rubber, natural or synthetic, does not of itself constitute novelty and invention. However, the substitution of a different material, also known, in combination with other elements may amount to invention if it develops new properties and uses of the article. *Walker on Patents,* Volume 1, Section 66, p. 79; *Florence-Mayo Nuway Company v. Hardy,* 168 Fed. (2d) 778, 780 (C. A. 4); *Yablick v. Protecto Safety Appliance Corporation,* 21 Fed. (2d) 885 (C. A. 3). In each of these cases known materials were substituted for other

materials in a combination process and patentability was sustained.

The long-established tests of invention exist here in high degree. National itself was working to solve the problem achieved by Molitor. Prior invention had failed to accomplish the result of Molitor and within a few years the process has to a great extent replaced the prior practices in the art. National states in its brief that it has discontinued the use of rubber latex and employs vinyl plastisol exclusively. Prendergast states that Arrow has discontinued all but 20% of slush molding with rubber. It is asserted, and not denied, that numerous machines have been sold by Presform to practice this precise method. It is significant that a technical dictionary now defines slush molding in terms of the use of plastisol rather than rubber. *Modern Plastics Encyclopedia* (1959). This is one of the strongest indicia of invention. Plainly, when manufacturing concerns, practicing the art and competing with each other in the market, extensively replace one method for another, it is evidence of invention. *Coats Loaders & Stackers, Inc., v. Henderson, supra; Goodwin v. Borg Warner Corporation,* 157 Fed. (2d) 267, 273 (C. A. 6); *Trabon Engineering Corporation v. Dirkes,* 136 Fed. (2d) 24, 27 (C. A. 6); *National Lock Washer Company v. George K. Garrett Company, Inc.,* 98 Fed. (2d) 643, 646 (C. A. 3); *Hughes Tool Company v. International Supply Company,* 47 Fed. (2d) 490 (C A. 10); *Cold Metal Process Company v. Republic Steel Corporation,* 233 Fed. (2d) 828, 837, 838 (C. A. 6). Cert. den. 352 U. S. 891; rehearing denied, 352 U. S. 955.

Also, National admits infringement of the Molitor process, which it declares it has used in all material and

substantial respects. This is evidence of invention. *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 441; *General Tire & Rubber Co. v. Fisk Rubber Corporation*, 104 Fed. (2d) 740, 747 (C. A. 6); *France Manufacturing Company v. Jefferson Electric Company* 106 Fed. (2d) 605, 608 (C. A. 6). When the prolonged efforts of experts fail to produce the remedy desired, the discovery of the needed improvement and commercial success justify the conclusion that there is invention although the device is simple. *Hughes Tool Company v. International Supply Company, supra.* Here there was a technological block and the fact that those skilled in the art had failed to eliminate it is cogent evidence of invention. *Cold Metal Process Company v. Republic Steel Corporation, supra,* p. 838; *Trabon Engineering Corporation v. Dirkes, supra,* p. 27. The history of the Molitor process is an instance of the "immediate and dramatic" success described in *Coats Loaders & Stackers, Inc. v. Henderson, supra,* and held to constitute proof of patentability. The complete operative process was given in the Molitor patent for the first time and the burden is on the infringer to show that the novelty is not patentable. *National Slug Rejectors, Inc. v. A. B. T. Electric Manufacturing Corporation*, 164 Fed. (2d) 333, 338, 339 (C. A. 7).

While the process creates a new and unusual result in which the tearing and distortion of the article on removal from the mold is minimized and they are fabricated by a simple, economical and novel process resulting in outstanding commercial success, we consider that the failure of competitors to solve the problem solved by Molitor and the rapid replacement by Molitor of

earlier processes in the industry is also strong evidence of invention.

The majority of the court considers that the instant case presents a process in which the whole "exceeds the sum of its parts", *Great Atlantic Tea Co. v. Supermarket Co., supra.* This is a true combination in which every element of the process co-acts with every other element and acts upon the material processed to produce the final result. The gelling spreads the film upon the inner surface of the mold, evenly distributed by the rotational casting, the fusion accomplishes a physical change in the material by which the liquid plasticizer enters into and merges with the fine particles of the resin in the casting batch. The material at this point is soft and weak but the cooling step brings the material to a condition of toughness, strength and pliability which allows the article to be removed from the mold without tearing, breaking or permanent deformation. The finished object is the product of an operation in which old elements combined in a new manner produce a wholly new result. It is a new function which fills a long felt need. *Foster Metal Products v. Bender, supra.* It is a new and unobvious result. *Brown v. Brock, supra.* The combination has contributed something not had before. It has added "to the sum of useful knowledge". It required long experimentation and more than ordinary mechanical skill to produce it.

As to the Molitor patent the judgment of the District Court is affirmed.

*Martin and Rekettye Patent No. 2,629,131.*

In this action, which charged infringement of the Martin et al. machine patent No. 2,629,131, built for the express purpose of carrying out the Molitor process, the defense was invalidity and noninfringement. The District Court entered judgment on both issues for the patentee.

The machine was built by Martin and Rekettye in 1949 and 1950 upon the instructions of Molitor, who said he gave them the specifications of what he would require in the way of time, temperature, and all the other features.

Claims Nos. 18, 31, 32 and 33 are in issue. Claims 18 and 31 are printed in the margin.[1]

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[1] 18. A machine for casting hollow articles in a matrix, comprising a conveyor, a shaft rotatable on the conveyor, means to drive the shaft during the operation of the conveyor, a crank arm on the shaft, a matrix rotatable on the end of the crank arm, said matrix adapted to hold a charge of liquid casting material, and inter-engaging driving means of unequal pitch to rotate the matrix to distribute the charge of casting material over the inner surface of the matrix.

31. Apparatus for the manufacture of hollow articles from elastomeric material comprising a movable support, an arm carried by the support, means to rotate the arm about its own axis, a sectional closed matrix on the arm, one section of a matrix being movable with respect to the other section of the matrix, guiding means on the arm for the movable matrix section, means to rotate the matrix on the arm about an axis angularly disposed with respect to the axis of the arm, a chamber through which the arm is moved, said chamber having heating means to set the material which has been distributed over the entire surface of the matrix by the

In the Martin machine a series of molds is carried on crank arms projecting from a vertical chain conveyor which carries the molds to the heating oven and cooling station. The molds are rotated in two planes and driven at different speeds in order to secure even distribution of the material. After the molds pass through the heating and cooling steps they are withheld from rotation by disconnection of the driving mechanism and the finished articles are automatically removed from the molds. Manual operation is employed when a fresh charge of material is deposited at the top of the conveyor's journey. The refilled molds then repeat their continuous operation.

The Miller machine, which National concedes practices the Molitor process, instead of a chain conveyor, uses a turntable in a horizontal plane carrying crank arms, each of which supports a spider upon which a plurality of molds is mounted. Rotation of the spider carries the molds successively through the heating and cooling chambers and then to the operator, who opens them, removes the finished articles and recharges the molds with material. The Miller machine differs from the Martin machine in the use of the turntable and the spiders instead of the conveyor chain. Another difference is that in Miller an automatic brake holds the molds

compound rotation thereof, a cooling station through which the arm carrying the matrix is moved to reduce the temperature of the matrix, and means to hold the matrix sections together during the rotation thereof but releaseable after passing the cooling station to permit the mold to be opened for the removal of the finished article and the admission of a new charge of the material to be introduced therein while the matrix is restrained from rotation.

upright and arrests their rotation after the heating and cooling process. Martin had achieved a similar result by disconnecting the driving mechanism which rotates the molds during this period. At the close of the Miller operation, the molds are opened manually and locked with bolts by an operator using an electric torque wrench for this purpose. With exception of the deposit of the charge of material in the mold by the operator, Martin is entirely automatic.

As to the validity of Martin, we are confronted by the rule announced in this court in *Nestle-LeMur Company v. Eugene, Limited,* 55 Fed. (2d) 854 (C. A. 6), which held that a machine patent not meeting the tests of patentability applicable to machine patents is invalid, notwithstanding that a clearly patentable process has been discovered and is being carried out by the machine in question. *Hemphill Company v. Davis Company,* 181 Fed. (2d) 573 (C. A. 4); *United States Gypsum Company v. Consolidated Expanded Metal Companies,* 130 Fed. 2d 888, 889, 891 (C. A. 6).

In deciding this question, therefore, we consider only the Martin machine and not the fact that it performs what a majority of the court has held above to be an inventive process.

Claim 18 provides for rotational casting in which the mold is rotated in different axes and also provides for a differential in the speeds on the different axes to assure uniform coverage of the inner surface of the mold.

These features had already been disclosed in Rempel Patent No. 2,469,892. In addition to rotational casting, also specified in Kay Patent No. 1,998,897, Rempel states

that satisfactory results have been attained by rotating the mold "one revolution per minute about one axis and one and one quarter revolutions per minute about the other axis, or otherwise in accordance with particular conditions or requirements." Sun Rubber concedes that the driving means of unequal pitch is not new.

As to Claim 18, in no prior art submitted here has a conveyor belt been provided with a plurality of molds constantly rotated during motion of the conveyor belt on axes in two planes, disclosing a differential in speeds of rotation on the two axes, effecting even distribution of the casting batch on the interior surface of the mold while the conveyor is moving. Although the elements are old, no prior machine has attained the spectacular results in speed and efficiency of mass production in this art attained by this machine. The District Court found in effect that the accused machine was designed on purpose to secure the same results in the same art. This claim is valid as a combination.

Claims 31, 32 and 33 also comprise old elements. The conveyor belt is old. Clayton, No. 2,014,468, discloses a "continuous trackway therein in which a plurality of molds are progressively and continuously operated through the charging, closing, heating, cooling and discharging periods." One of Killian's (No. 2,127,827) objects is to provide "means for conveying forms through a certain path." Jensen, No. 1,812,242, specifies an endless intermittently or uniformly moving mold belt which contains molds that, after having received the liquid mass, are rotated automatically in two planes. The feature of a construction operating in cycles using a continuous rotational casting through the various steps is old.

Claims 31-33, when read together with the specifications, disclose that the mounting, opening and closing of the mold are automatic. In addition to stating that this is the purpose of the invention, the specification further declares that "the machine shown and described herein is automatic in its operation * * *". It further states "it will thus be seen that an automatic machine has been perfected in which a multiplicity of matrices are carried on a continuously moving conveyor through all the stages necessary for the internal casting of all sorts of hollow articles." The feature of arresting the rotation of the molds holding them in upright position during the time that the article is stripped from the mold and the mold is recharged is an entirely new feature in this combination. The same idea was followed by Miller in the use of his automatic brake.

The District Court held that the Martin machine provided an automatic continuous means whereby from the pouring of the entire amount of material into closed molds until the extraction of the completed article no manual operation was required. The court pointed out that this had not theretofore been accomplished or disclosed in any earlier patent or publication and held that this constituted an invention. This was a finding of fact, *Faulkner v. Gibbs,* 338 U. S. 267, and not clearly erroneous. While prior art patents presented important features of Martin, it would have taken considerable modification and more than ordinary mechanical skill to produce the equivalent of the Martin operation. The Jensen Patent for the making of chocolate Easter eggs, so heavily relied on here by appellants, was before the Patent Office. Assuming that the art is analogous, we do

not consider that Jensen requires reversal in view of the fact that the examiner had it before him in making his decision.

The Martin device which has obtained results hereinbefore described involves more than the ordinary skill of the art. The fact that old elements combine to produce the new inventive result is not decisive. *Williams Manufacturing Company v. The United Shoe Machinery Corporation,* 316 U. S. 364, 367. *Diamond Rubber Co. v. Consolidated Rubber Tire Co.,* 220 U. S. 428, 443.

The vice of aggregation urged by appellants does not exist in this particular combination. While it discloses successive means of accomplishing certain steps, this is not in itself fatal to validity. The elements of the combination need not act simultaneously. *1 Walker on Patents* 216, Sec. 41 (Deller's Edition). As pointed out by Judge Simons, speaking for this court in *Buffalo Springfield Roller Co. v. Galion Iron Works Mfg. Co.,* 215 Fed. (2d) 686, 687, the decision of the Supreme Court of the United States in the *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.,* 340 U. S. 147, does not hold "that combinations of old elements are never patentable." The new assemblage is an entirety in which the elements coact to produce a single unitary result. The successive operations carried out in the Martin machine act upon and affect the same material and produce a finished article which all elements have cooperated to create.

The judgment of the District Court as to the validity of the Martin patent is affirmed.

*Infringement of Molitor and Martin.*

The District Court held that both National and Presform had infringed the Molitor process patent and the Martin machine patent. National concedes infringement as to Molitor if it is valid. Presform states in the brief that it does not concede contributory infringement of Molitor, "but does not press that issue here." The District Court found that Presform "designed the Miller machine in cooperation with Whittington for the purpose of manufacturing the National Latex articles", and, hence, "must be held as a contributory infringer". This finding is sustained by the record. National concedes that it is manufacturing its products on the Miller machine by the Molitor process. As to Presform, the record contains advertisements of the Miller machine put out by Presform, extolling the advantages of the machine for practicing the process which in substance is that of Molitor. In *Rubber Age*, February, 1956, Miller published an article describing these machines, calling upon manufacturers using rubber in the art to switch to plastisols and, in effect, to use the Molitor process. Also, appellants, in proceedings in connection with the application for the supersedeas bond, filed March 12, 1958, admitted that 47 machines built by Miller, the President of Presform, identical with those designed by Whittington and all designed for rotational casting of vinyl resins, had been sold to competitors of Sun Rubber. The judgment that both appellants infringed the Molitor Patent must be sustained. *35 U. S. C., Sec. 271 (b) (c).*

The "more difficult question" as rightly stated by the District Court is presented as to the infringement

of Martin by the accused Miller machine. The machines do not resemble each other in form. Necessarily a horizontal turn-table with a series of crank-arms carrying spiders upon which molds are mounted will not closely resemble a conveyor belt carrying molds in a vertical movement. This circumstance is not determinative. 40 *American Jurisprudence Patents*, § 159, §160. The successive steps of compound rotation, the differential speeds, gelling, fusion and cooling, are carried out in Miller. The District Court found, in effect, that Miller obtains substantially the same results as Martin. The critical question is whether the result is achieved in the same way as it is achieved by Martin. 40 *American Jurisprudence*, § 159.

Under the established patent law, if Martin were a pioneer patent, the court would apply a liberal construction and tend to hold the Miller devices equivalent to those of Martin. 40 *American Jurisprudence*, § 156, p. 645. But, as the District Court recognized, this was not a pioneer patent. The art was crowded. The principal elements of Martin were old and found in various workable prior patents in the same art. Martin's claim to validity rests upon the fact that it is a true combination consisting of old elements in which every element coacts with the others to produce a new and useful result beyond the ordinary skill of the art.

Also, Miller lacks certain automatic features so helpful in efficient production and stressed in the Martin patent. The Martin specification calls automatic operation an essential purpose of the invention. The completely automatic operation of Martin was relied upon by the Patent Examiner and by the District Court in his ruling on validity. Under this record, the majority of

the court thinks that, although the Martin patent is valid, we must construe it strictly according to its terms and that, so construed, while Miller may secure substantially the same results as Martin, it secures them by means not in all respects the substantial equivalents of Martin. The final result of completely automatic operation Miller does not achieve. The two machines do not operate in substantially the same way.

This fact compels a holding that the accused machine does not infringe. The judgment of the District Court is affirmed as to validity of the Molitor patent and its infringement by both appellants and as to the validity of the Martin patent but reversed as to infringement by either appellant of the Martin patent.

The case is remanded to the District Court for further proceedings in accordance with this opinion.

**McAllister, Circuit Judge dissenting.** Judge Allen, in her usual able fashion, with the searching and illuminating mind of a great patent judge, has so fully stated the facts and presented the issues in this complex case, that a dissent to the conclusions expressed by her requires no additional, or counter statement of the controversy.

The difference in our views is to be found in the well tilled field of an area of patent law that is teeming with hundreds of adjudications embodying conflicting opinions: of when a patent is invalid for want of invention; and of when a patent is invalid because it is for a mere conjunction of old parts, which, in aggregation, perform or produce no new or different function or operation than that theretofore performed or produced by them.

*Dissenting Opinion.*

It seems to me that the Molitor patent is invalid for want of invention. Admittedly, the elements of his combination were old: the use of vinyl resin and plastisol; deaeration of the plastisol prior to molding; rotational casting; use of a non-porous mold. It is argued by appellee that no prior use involved depositing a measured charge of a liquid mixture of vinyl resin and plastisol in a closed hollow mold with a charge less in volume than the volume of the mold; that the combination of rotating the mold in a multiplicity of planes and simultaneously heating the material to gell it against the inner surface of the mold, while the mold was rotating, was new; and that the step of cooling the temperature of the material in a closed mold below the fusion point after the material had been gelled on the inner surface of the mold, and fused, was new.

To me, it appears most significant that Molitor's success was contemporaneous with his use of the new Goodrich polyvinyl material, "Geon Paste Resin 100X210." This was the substance that, when heated between 325° and 350° F., resulted in the fusion of the resin and plasticizer. This differed from the prior "slush molding," since there was no waste liquid remaining. According to the Bulletin of the Goodich Company: "The plasticizer serves as a vehicle to carry the resin particles, and remains as a separate liquid or external lubricant. Upon heating, plasticization takes place, with the liquid plasticizer being absorbed by the resin. This 'fusion' forms a tough, homogenous and flexible mass." Obviously, then, the charge in each mold, of the Goodrich material would be less than the volume of the mold, unless it were sought to make a solid article, rather than a hollow one—while, with "slush molding," more of the plastic substance

would be poured in each mold—in fact, each mold would be filled—since there would be a liquid residue remaining after the plastic substance had gelled against the inner surface of the mold. Yet the method of "slush molding" was akin to the molding practiced by Molitor, with the Goodrich resin.

Molitor, himself, testified that, in the fall of 1947, he was working on "slush" castings, when he first received from the Goodrich Company, the new polyvinyl material, "Geon Paste Resin 100X210." Molitor testified: "I was particularly satisfied with the 100X210, and I stayed with that." The conclusion seems clear that he thereupon gave up slush molding, and "stayed with" the Goodrich material that fused, instead of leaving a liquid residue.

It would seem that the Delacoste patent process taught what Molitor professes to teach — certainly, at least, with the use of the Goodrich material, "Geon Paste Resin 100X210." The District Court said that one step missing in Delacoste, and essential to produce the article, is the recognition of the temperature change to accomplish the transition of the material from gel to fusion; and that, without considerable experimentation and a search for disclosures in the wide field of heat treating, time exposure, and range of temperatures, together with the failure clearly to define the types and composition of material required to make the character of article intended, leaves Delacoste without effective force as anticipation. It is also argued that the step of cooling the temperature of the material in a closed mold below the fusion point after the material had been fused, was new.

All of the foregoing seems to overlook the fact that the Goodrich Bulletin of September 2, 1947, stated that

to accomplish the fusing of the material, "Geon Paste Resin 100X210," it was necessary to heat the mass to temperatures of 325° to 350° F.; and, also, that the instructions furnished by the supplier of the resin, told how to use it to secure the best results of the fused products.

Robert C. Sessions, appellee's expert witness, was asked, on cross-examination, the following question, and gave the answer indicated:

> "Q. How about the instructions the person practicing Delacoste would get from the supplier of the plastisol? I understand it is admitted here by plaintiff plastisol was old. Now, why wouldn't the man skilled in the art use the instruction given by the person providing the plastisol?
>
> A. He probably would and could use the instructions provided by the person."

As to the failure to define the types and composition of material required to make the character of article intended, counsel for appellee was interrogated by the court, during the trial, as to this question of the composition of the material:

> "The Court: You don't claim any novelty for this mixture?
>
> Mr. Ely: *I say this, the making of the mix is an important step in the process.*
>
> The Court: In one of the claims?
>
> Mr. Ely: *No.* Our claim says *a* mixture of polyvinyl resin and a plasticizer."

The 1947 Bulletins of the Goodrich Company and their instructions as to how to use the "Geon Paste Resin

100X210," together with the old elements used by Molitor, account for Molitor's success but, in my opinion, do not raise his conception to the level of invention. *Great Atlantic and Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U. S. 147.

As to the patent of Martin et al. for the apparatus for the manufacture of hollow cast articles, it is my view that under the decisions of this court in *General Motors Corp., et al. v. Estate Stove Co., et al.*, 201 F. 2d 645, and *General Motors Corp. v. Estate Stove Co., et al.*, 203 F. 2d 912, following the Supreme Court in the Great Atlantic and Pacific Tea Co. case, *supra*, it embodies a mere conjunction of old parts which, in aggregation, perform or produce no new or different operation than that theretofore performed or produced by them.

Molitor and Martin combined to accomplish the manufacture of excellent products in a single operation without damaged material or scrap, and reduced the time of operation from a day to fifteen minutes, with immense reduction of labor cost. In the years before the Supreme Court decision in the Great Atlantic and Pacific Tea Co. case, the determination of this court in the instant case would probably be unanimous, to sustain the judgment of the District Court. In the light of that decision, I am of the opinion that the patents are invalid.

## MEMORANDUM ON PETITION FOR REHEARING

Filed January 13, 1960.

Before: ALLEN and MCALLISTER, Circuit Judges, and MATHES, District Judge.

**Allen, Circuit Judge.**

A petition for rehearing addressed only to the Molitor patent No. 2,629,134 has been filed herein. It attacks the opinion and judgment of this Court affirming the District Court's holding that Molitor is valid. The majority of the Court consider the matters adduced not to be ground for granting a rehearing.

A vigorous attack is made upon the Court's history of this controversy. It is said that various statements made in the opinion have no support in the record. Many of the statements now objected to were made by appellants' witnesses; for instance, appellants' witness testified that Molded Latex had a shrinkage of 20% linearly and about 50% by volume. Ficarra said that in latex you would get almost 40% by volume shrinkage. During Ficarra's experiments with plastisols, Molded Latex was manufacturing products from latex. His notebook also showed work on slush molding.

It is asserted that this Court has no authority to describe the relevant events in the case. It is established law that the findings of the District Court cannot be set aside unless clearly erroneous. (Rule 52 (a) Federal Rules of Civil Procedure.)

This does not mean that the Court of Appeals in affirming a judgment of the District Court cannot draw

inferences from written and undisputed facts. This Court has approved the findings and affirmed the judgment of the District Court with one exception not questioned here. The facts were partly documentary and the evidential facts presented in the opinion were in the main not disputed. The dispute is as to the inferences to be drawn from the facts. Under such circumstances Courts of Appeals are authorized to draw their own inferences from the evidence. (*Stubbs v. Fulton Nat. Bank of Atlanta*, 146 F. 2d 558, cert. den. 325 U.S. 864; *Iravani v. Barkley*, 244 F. 2d 238, cert. den. 354 U.S. 939.)

It would be unfortunate if the Court of Appeals could not summarize material incidents not fully discussed below, particularly where, as here, a meager factual explanation on certain points was given in this court by counsel on both sides.

The Molitor patent was found to be valid on extensive hearing in the trial court which not only included testimony of experts, but also afforded the District Court the opportunity to view moving pictures of the operation. The claims describe a combination. The use of an old element does not invalidate a combination if the combination is new. This record contains the testimony of a highly qualified expert that the use of the closed mold, the rotation of the mold in a multiplicity of planes, and the simultaneous heating of the mixture to gel it against the inner surface of the mold is new, and cooling of the temperature below the fusion point of the material in a closed mold in this combination is new. The result is certainly new.

Appellants in their petition for rehearing repeatedly overlook the fact that this Court adopted the finding and

conclusion of the District Court on this all-important point, and make statements of fact which are highly inaccurate because the testimony, or purported statements from our opinion are distorted by being taken out of context and condensed without recognizing that the opinion is speaking of a combination. Thus appellants say this Court stated that cooling in the mold is new. What the Court said was that cooling in a closed mold, together with other elements of the combination, was new. Appellants say in effect that Molitor admitted gelling, fusing and cooling the mixture within the same mold were old in the art in 1949. The testimony referred to was given in December, 1957, in answer to a question which asked Molitor to tell "the regularly accepted normal way of slushmolding." The answer evidently related to slush molding in 1957, after much of the industry had switched from rubber to plastic and was aware of the Molitor process. The switch at Arrow occurred in 1953. The answer did not relate to slush molding in 1949 and 1950.

The petition for rehearing says: "The opinion states that the early commercial resins were 'not satisfactory' ". What the opinion actually says is that Ficarra, appellant's witness "stated that the commercial materials then available" * * * "were not satisfactory". Ficarra also said in effect that his work consisted in trying to formulate better products in that line. Attributing the statement quoted above in the petition for rehearing to the court, instead of Ficarra, is another instance of the inaccuracies with which the petition is replete.

Appellant's contention that the admissions of Molitor are directly contrary to the holdings of the opinion is one example of distortion. Molitor is credited

by this Court with devising a combination in which many features are concededly old. To support their assertion that Molitor has admitted the contrary of the Court's findings, appellants tack testimony of Molitor given in December, 1957, as to the nature of slush molding, on to plaintiff's answer to an interrogatory which states that in 1949 Sun Rubber employed slush molding techniques in casting small [*rubber*]* squeeze bulbs.

In slush molding of rubber products as well as in slush casting of metals (*Metal Castings*, p. 245, Joe L. Morris, 1957) the so-called "in and out" method, the step of discarding the excess material, pouring it in and then out of the mold, is important and apparently is still retained. The mold is therefore not closed.

In 1957 slush molding evidently had taken on certain elements of Molitor. The switch by much of the industry to plastics from rubber occurred shortly before and around this time. In 1953 Arrow Rubber and Plastic Corporation, for instance, substituted use of the vinyl resins in 80% of its business, formerly all slush molding. It was during this period that 47 Miller machines were sold to practise Molitor. The contention that evidence as to use of vinyl resins in a slush molding technique in 1949, may be carried over to a statement made in December, 1957, as to the then status of slush molding and that the two statements taken together amount to an admission that in 1949 slush molding presented the main elements of Molitor, has no merit.

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* The word "rubber" was deleted by the "Order on Motion for Rehearing En Banc" filed March 10, 1960, infra p. 63.

Appellants also challenge the conclusion of the majority of the Court that Molitor teaches the blending of the materials in the casting batch in the mold, while Goodrich Bulletins Nos. I and II suggest blending of these materials outside of the mold. Bulletin No. I states that after the resin and plasticizer have been blended, the mixture may be molded. Bulletin No. II points out that "the plasticizer serves as a vehicle to carry the resin particles and remains as a separate liquid or external lubricant. Upon heating plasticization takes place with the liquid plasticizer being absorbed by the resin." The Goodrich Rubber Co. did not use the term "mix". It used the term "blend" presumably with the knowledge that a blend is different from a mixture. The product is offered for sale as a paste. Evidently the materials of the paste have progressed beyond the point of mixture where the plastisol remains as a separate liquid or external lubricant.

It is not, as stated by appellants, undisputed in the record that "in the accused practises the resin and the plasticizer are not blended" in the molds, as in Molitor, but "in a vessel separate and apart from them." The Molitor patent, Column I, is the only reference given for this extremely inaccurate statement. Appellant National conceded that it infringes Molitor if it is valid and the accused practises therefore are conceded by National to be the practises of Molitor. The District Court found National guilty of infringement. Presform has been adjudged guilty of infringement and in this appeal does not contest that issue. The test of what the accused practises do, therefore, is what is done in Molitor.

The Molitor patent specification does not use the word "blend" nor does it show blending of materials

before entering the mold. The specification provides for the preparation of the casting batch by thorough mixture "in any suitable vessel"—"equipped with a power driven stirrer". In order to thoroughly wet the dry powders the batch is agitated in the vessel and when it is thoroughly mixed the cover is clamped tightly on the vessel and the speed of the agitation is increased in order to remove air from the interior of the vessel and from the batch through a source of vacuum. No heat is employed during this process and heat is first specified after the material is placed in the mold.

It is the essence of the "blending" operation that the "separate things mixed cannot be distinguished". Synonyms of "blend" are "merge", "coalesce", and "fuse". (Webster's *New International Dictionary,* Unabridged, 1955.) The same authority defines the synonyms as follows:

> "Merge"—"To be sunk, swallowed up, or lost; to lose identity by absorption or immersion in something else."
>
> "Coalesce"—"To grow together, to unite in one body or product."
>
> "Fuse"—"To unite or blend as if melted together."

In Molitor, prior to the application of heat, the plasticizer remains in liquid or lubricant form and the blending is not achieved. This is undisputed. A qualified expert testified that as the temperature is raised to 350 "the liquid plasticizers, liquid material of the casting batch, enters into and merges with the fine particles, or finely divided particles of the resin that is in the plastisol

casting batch; and when that process is completed or substantially completed the material has been fused." The blending and fusing in Molitor occurs upon the heating of the mold. Goodrich Bulletins Nos. I and II are in accord. Bulletin No. I states that "until the temperature is raised, the plasticizer remains as a separate liquid or external lubricant for the resin". Exactly the same statement is made in Bulletin No. II.

While the word "blending" is not used in the Molitor claims, each one provides for heat while rotation is going on and thus shows that heat is used to drive the plasticizers into the resin after the insertion of the material in the mold. The teaching of the blending operation in the mold is implicit in the Molitor claims.

If we are in error upon this point which we have discussed somewhat at length because of the meager information given by counsel, the majority of the Court is still convinced that this contention has no merit for other material reasons. As pointed out in the opinion, the third Goodrich Bulletin upon which appellants most heavily rely is not anticipation under the statute. (35 U. S. C. Sec. 102). It was published August, 1949, within the year before Molitor's filing date of June 27, 1950. The first two Bulletins contain general suggestions as to the use of the Goodrich resins in molding, calendering solution, and latex techniques; in Bulletin No. I, The Goodrich Rubber Co. expressly warns that the product recommended is "still a pilot plant product". The two Bulletins fail to attain the degree of definiteness necessary to constitute anticipation. They contemplate the use of separate equipment. They did not teach the appellants' expert witness, Ficarra, spending 90% of his

time on vinyl resins, try as he would, how to devise a process which would obtain the result of Molitor.

The error in the opinion with reference to the names of National Latex Products Co. and Molded Latex Products Co. has been corrected. It in no way affects the question as to whether the sale of doll's heads ordered by Imperial Crown Toy Corp., in April, 1950, was or was not a prior use.

*Modern Plastics Encyclopedia,* both for 1959 and 1960, may be found in the Cleveland Public Library.

The petition for rehearing is denied.

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## ORDER ON MOTION FOR REHEARING EN BANC

Filed March 10, 1960.

Before ALLEN and MCALLISTER, Circuit Judges, and MATHES, District Judge.

This case came on to be heard on appellants' motion that the above appeals be reheard by the Court en banc, and that this motion be disposed of by the Court sitting en banc, and also upon appellants' second petition for rehearing included in the same application with the motion, and upon appellee's motion to strike appellants' motion and the second petition for rehearing.

As to the motion, a Court of Appeals has the power to provide for sessions of the Court en banc. *Western Pacific Railroad Case,* 354 U.S. 247, 253.

A rule long established and never deviated from by this Court is that in cases heard and decided by a regular

division of three judges, presenting similar motions for en banc proceedings, a petition to rehear and reconsider should not be considered by the Court en banc. *National Labor Relations Board v. Cambria Clay Products Co.*, 229 Fed. 2nd 433. *Northwest Airlines, Inc. v. Glenn L. Martin Co.*, 229 Fed. 2nd 434.

In the Cambria case supra the Court declared that the uniform procedure heretofore followed by the Court should not be departed from, namely, that in cases where the appeal was heard, and the judgment or order complained of was decided, by a regular Court consisting of three judges only, a petition to rehear or to reconsider should not be considered by the Court en banc. In the Northwest Airlines case supra the Court quoted the above statement from the Cambria case and also declared that the "uniform procedure" referred to in en banc cases was established "after full consideration by a majority of the Circuit Judges of this Circuit in active service". The latest decision on this question reaffirms the rule. *National Bank of Detroit v. Wayne Oakland Bank*, 252 Fed. 2nd 537, 544 (1958).

The Court which heard and decided this case was, in contemplation of the statute, rules and procedures of the Court of Appeals for the Sixth Circuit, a regular Court of three judges only. It consisted of Chief Judge McAllister, Judge Florence Allen and Judge William C. Mathes, U.S. District Judge for the Southern District of California, Ninth Circuit, sitting in the United States Court of Appeals for the Sixth Circuit by designation and assignment under the statute. Under Title 28, Section 296, Judge Mathes is authorized, notwithstanding expiration of his designation and assignment to this

Court, to decide or to join in the decision and final disposition of all matters submitted to him during such period, including applications for rehearing.

Judge Allen was designated by the Chief Judge of the Court of Appeals for the Sixth Circuit to sit in the division of the Court consisting of three judges only, which heard this case on Feb. 16, 1959, and also was designated and assigned by the Chief Judge to write the opinion. In the decision and final disposition of this case she is a regular Judge of the Court.

The motion that the appeals be reheard en banc, and that the motion be disposed of by the Court sitting en banc must be denied.

The petition for rehearing is appellants' second petition to rehear. Neither the applicable statute nor the rules of this Court authorize a second or successive petitions for rehearing. A pleading may be stricken out if not authorized by law or the rules governing the practice. Moreover the petition presents no questions that were not in substance presented in the first petition to rehear, discussed by the Court in a memorandum denying rehearing and denied in an Order entered January 13, 1960.

The statement in the memorandum that the squeeze bulbs manufactured by appellee in 1949 were "rubber" is incorrect.

It is ordered that the word "rubber" be and it hereby is eliminated from line 41, page 3, of the memorandum. It is ordered that the motion to reconsider the appeals en banc and to have the motion for reconsideration submitted to the Court en banc be and it hereby is denied.

It is ordered that the second petition for rehearing be and it hereby is denied.
Approved for entry:

/s/ FLORENCE E. ALLEN
United States Circuit Judge

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## ORDER STAYING MANDATE

Filed April 6, 1960.

Before

ALLEN, MCALLISTER, United States Circuit Judges, and MATHES, United States District Judge

These cases came on to be heard upon appellants' second motion for stay of mandate, filed March 15, 1960, upon appellee's motion that the mandate issue, filed March 16, 1960, and upon memoranda filed by each appellant. Appellants' previous motion for stay of mandate was granted January 25, 1960, for the usual thirty-day period.

Appellee's motion is based upon the provision of Rule 24 (1) of this court which reads as follows:

> "Rule 24 MANDATE (1) *When Issued.* In all cases finally determined in this court, a mandate or other proper process shall be issued by the clerk at the expiration of twenty days from the entry of judgment in this court, unless a petition for rehearing has been granted or is pending. If such petition is denied, the mandate shall be issued after a further period of five days."

A petition for rehearing filed by appellants was denied January 13, 1960. Appellants filed a second petition for rehearing February 2, 1960, which was held by the court not to be authorized by the statute nor by the rules of this court and was denied February [sic] 10, 1960.

The Court has concluded, nonetheless, to deny appellee's motion, filed March 27, 1960, to issue our mandate in these cases, and to grant appellants' motions, filed March 16, 1960, for a stay of mandate. Accordingly, the mandate will be stayed in Nos. 13568 and 13569 for thirty days from the date of entry of this order for the *sole* purpose of affording appellants the opportunity to seek review in the Supreme Court of the United States. If, within the period of such thirty-day stay appellants shall file in the Supreme Court of the United States a petition for writ of certiorari in each of the cases, the mandate will be further stayed pending the ruling of the Court upon the petition; and if certiorari be denied, then our mandate will issue upon the expiration of five days following the Court's order of denial; but if certiorari be granted, then our mandate will be further stayed until expiration of five days following the disposition of the cases in the Supreme Court of the United States pursuant to Rule 59.2 and 59.3 of the Court. (346 U.S. 1009)

Approved for entry:

FLORENCE E. ALLEN
United States Circuit Judge.